

REMARKS

This application has been reviewed in light of the Office Action dated February 3, 2005.

Claims 1-30 are presented for examination, of which Claims 1, 9, 27, 29 and 30 are in independent form. Claims 1, 2, 5, 6, 7, 9, 11, 16, 17, 18, 20, 27, 29, and 30 have been amended to define still more clearly what Applicant regards as his invention. Support for the amendments is found at least in Figures 6 and 8 and the accompanying text in the specification and at page 26 line 18 through page 31, line 13, at page 32, line 22 through page 37, line 11, and at page 49, line 23 through page 52, line 22. Favorable reconsideration is requested.

Claims 1, 2, 4-7, 9, 11, 12, 15-18 and 21-26 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent 6,088,004 (*Domae et al.*) in view of U.S. Patent 6,049,316 (*Nolan et al.*). Claims 3, 8, 10, 13, 14, 19, 20 and 27-30 were rejected as being obvious over those patents in view of U.S. Patent 6,018,332 (*Nason et al.*). In response, while not conceding the propriety of the rejections, independent Claims 1, 9, 27, 29, and 30 have been amended. Applicant submits that as amended, these claims are allowable for the following reasons.

MPEP § 2142 places the burden of proof on the Patent Office of “ factually supporting any prima facie conclusion of obviousness”. This is accomplished when three criteria are satisfied:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both

be found in the prior art, and not based on applicant's disclosure.

As will be discussed below, the Office is not understood to have yet established that these criteria have been satisfied for the amended independent claims.

1. The Office has not yet established that the applied art discloses or suggests each claimed feature of the amended independent claims.
 - a. The Office has not yet established that the *Domae et al.* and *Nolan et al.* patents disclose or suggest the attributes information memory of amended Claim 1.

Amended independent Claim 1 is directed to a display control device for controlling a display to display pictures, which are from a plurality of signal sources connected to signal lines, in a plurality of display windows on a single screen, respectively. The display control device of Claim 1 comprises, in part, an attributes information memory, which stores display attributes information for each of the plurality of display windows on the single screen.

Pages 2 and 3 of the Office Action posit that the primary reference to *Domae et al.* discloses a display control device, while the *Nolan et al.* patent discloses the attributes information memory recited by Claim 1. But these patents are not understood to disclose or suggest either the display control device or the attributes information memory recited by amended Claim 1 for the following reasons.

Page 2 of the Office Action cites Figure 1 and column 7, lines 24-28 of the *Domae et al.* patent as showing “. . . a display control device for controlling display of pictures. . . which are

from a plurality of signal sources (21a, 21b) connected to signal lines on a plurality of display areas on a screen, respectively. . . .”. But column 7, lines 24-28 of the *Domae et al.* patent is merely understood to teach the displaying of images on multiple monitors. The display of multiple pictures from multiple sources in a plurality of display windows on a single screen is not discussed:

As described above, the image display system according to the present invention can perform multi-screen displaying of static and animated images from an image source onto a plurality of over-head monitors and masking monitors. (column 7, lines 24-27 of the *Domae et al.* patent)

In addition, neither Figure 1, nor the remainder of the *Domae et al.* patent is understood to disclose or suggest a display control device for controlling a display to display pictures which are from a plurality of signal sources on a plurality of display windows on a single screen. Rather, this patent is understood to merely relate to an image display system for bowling lanes, in which an image from one of a plurality of image sources is selected to be displayed on a plurality of monitors or is split into images for multi-screen displaying.

Turning to the *Nolan et al.* patent, which was cited to show the attributes information memory recited in Claim 1, page 3 of the Office Action identifies memory 60 as shown in Figure 6 and column 7, lines 35-58 of the *Nolan et al.* patent as disclosing the claimed attributes information memory. But column 7, lines 35-58 is merely understood to teach that the video memory 60 stores graphics data, such as pixels, to be displayed on display 22 or CRT 24. No storing of display attributes information for each of a plurality of display windows from a plurality of signal sources on a single screen is understood to be disclosed:

FIG. 6 is a diagram of a graphics controller with active and default registers for setting the vertical refresh rate for an external CRT monitor. Host interface 70 is coupled to a host bus in the portable PC, such as the PCI bus. Commands and graphics data are received from the PC's main processor over PCI bus by host interface 70. Graphics data, such as pixels for display on the screen, are transferred from host interface 70 to video memory 60 where they are stored.

During a screen refresh, all the pixels displayed on the screen are fetched from video memory 60 and serially transferred to flat-panel display 22 or external CRT 24. The pixels are arranged in horizontal lines as is well-known in the art. CRT buffer 52 is a FIFO buffer which receives pixels from video memory 60 in parallel and transfers them serially to attribute controller 54, which alters attributes to produce effects such as reverse video or blinking. RAM lookup table 56 re-maps the color of the pixels, allowing for a larger virtual palette of colors for a limited number of bits in a pixel. The re-mapped pixels are converted from digital format to analog voltages by digital-to-analog converter (DAC) 58, and the red, green, and blue color components are transmitted to external CRT 24 over external cable 72 as analog voltages. RAM lookup table 56 and DAC 58 are usually integrated together as a RAMDAC.

In addition, neither Figure 6, nor the remainder of the *Nolan et al.* patent is understood to disclose or suggest an attributes information memory, which stores display attributes information for each of a plurality of display windows in which a plurality of display pictures from a plurality of signal sources are displayed on the single screen, as recited by Claim 1. Rather, the *Nolan et al.* patent is understood to merely relate to a system for allowing a user to dynamically switch monitors without reconfiguring the refresh rates of "legacy" monitors. This is understood to be accomplished by separating the refresh rates for legacy monitors and plug-and-play monitors into default and active registers, so that plug-and-play software is prevented from disturbing the

default rates for legacy monitors (see column 13, lines 28-32).

Thus, the Office is not understood to have not yet established that either the *Domae et al.* patent or the *Nolan et al.* patent discloses or suggests the attributes information memory, recited by amended Claim 1. For this reason, the Office Action is not understood to have yet established a prima facie case of obviousness against amended Claim 1 under MPEP § 2142. Accordingly, Applicant respectfully requests that the rejection of amended Claim 1 over the patents to *Domae et al.* and *Nolan et al.* be withdrawn.

- b The Office is not understood to have yet established that the *Domae et al.* and *Nolan et al.* patents disclose or suggest the notification unit of amended Claim 1.

Amended Claim 1 also recites a notification unit, which notifies one of the signal sources of the stored display attributes information corresponding to the display windows in which the pictures from each of the plurality of signal sources are displayed.

Page 2 of the Office Action states that column 7, lines 24-28 of the *Domae et al.* patent shows the notification unit recited by Claim 1.¹ But, as noted above, column 7, lines 24-28 of the *Domae et al.* patent is merely understood to teach the displaying of images on multiple monitors. No display of pictures in a plurality of display windows is understood to be discussed in this passage. Therefore, this passage is not understood to disclose a notification unit, which

¹Applicant notes that page 2 of the Office Action also contradicts this statement by stating “However, Domae et al. do not disclose. . . a notification unit. . .” Accordingly, Applicant respectfully requests that the Examiner clarify whether he believe that the *Domae et al.* patent shows the claimed notification unit.

notifies one of the signal sources of the stored display attributes information corresponding to the display windows in which the pictures from each of the plurality of signal sources are displayed, as recited by amended Claim 1.

Page 3 of the Office Action also indicates that “. . .the connections of memory 60, and between host interface and CRT BFR, see figure 6. . .” of the *Nolan et al.* patent discloses the claimed notification unit. But Figure 6, merely shows an arrow from the host interface 70 to the video memory 60 and an arrow from the video memory 60 to the CRT buffer 52, indicating that the video memory 60 receives an input from the host interface and transmits an output to the CRT buffer 52. Column 7, lines 40-42 of this patent states that the data transmitted from the host interface 70 to the video memory 60 comprises “Graphics data, such as pixels for display on the screen. . .”. And column 7, lines 43-58 indicates that this pixel data is transmitted from the video memory to the display 22 or CRT 24 via the CRT buffer 52. Thus, all that appears to be disclosed in the portions of the *Nolan et al.* patent identified by the Office Action is the transferring of graphics data from the host interface 70 to the display 22 or the CRT 24 through the video memory 60 and the CRT buffer 52. Accordingly, Applicant does not understand these portions of the *Nolan et al.* patent to disclose or suggest the notification unit, which notifies one of the signal sources of stored display attributes information corresponding to the display windows in which the pictures from each of the plurality of signal sources are displayed, as recited by amended Claim 1.

Therefore, the Office is not understood to have yet established that the applied art discloses or suggest all the features of amended Claim 1, as required by MPEP § 2142. As a

result, the Office is not understood to have yet established a prima facie case of obviousness against amended Claim 1. Accordingly, for this additional reason, Applicant respectfully requests that the rejection of amended Claim 1 be withdrawn.

- c. The Office is not understood to have yet established that the *Domae et al.* and *Nolan et al.* patents disclose or suggest the display selection unit or the appropriating step or code recited in amended Claims 9, 27, 29, and 30.

Amended independent Claim 9 recites, in part, a display selection unit, which appropriates each of the pictures from a plurality of signal sources to each of the plurality of display windows on a single screen according to created display selection information that is based on identification signals relating to the pictures from the plurality of signal sources.

To reject Claim 9 as obvious over the *Domae et al.* and *Nolan et al.* patents, MPEP § 2142 requires the Office to establish that one of these patents discloses or suggests the claimed display selection unit. But, instead the Office Action fails to even allege that these patents disclose or suggest this feature. In fact, page 4 of the Office Action admits that the *Domae et al.* patent fails to disclose or suggest a display selection unit. And neither page 4, nor any other page of the Office Action alleges that the *Nolan et al.* patent discloses or suggest a display selection unit. Moreover, Applicant does not understand either of these patents to disclose or suggest a display selection unit, which appropriates each of the pictures from a plurality of signal sources to each of the plurality of display windows on a single screen according to created display selection information, as recited by amended Claim 9.

Thus, the Office is not understood to have yet established the factual basis for concluding that the cited art discloses or suggests all the claimed features of amended Claim 9, as required by MPEP § 2142. For this reason, the Office is not understood to have yet established a prima facie case of obviousness against amended Claim 9. Accordingly, Applicant respectfully requests that the rejection of amended Claim 9 be withdrawn. And since amended Claims 27, 29, and 30 recite a similar display selection unit, or a similar appropriating step, or a code for a similar appropriating step, these claims are understood to be allowable for similar reasons.

- d. The Office is not understood to have yet established that the *Domae et al.* and *Nolan et al.* patents disclose or suggest the notification unit or the notifying step or code recited in amended Claims 9, 27, 29, and 30.

Claim 9 recites, in part, a notification unit, which notifies one of a plurality of signal sources of created display selection information that is based on identification signals relating to pictures from the plurality of signal sources displayed in a plurality of windows on a single screen.

Page 4 of the Office Action admits that the *Domae et al.* patent fails to disclose or suggest the claimed notification unit. For that reason, page 4 of the Office Action cites Figures 2A and 2B of the *Nolan et al.* patent to disclose this feature. But Figures 2A and 2B are merely understood to disclose, as discussed at column 2 and 3, the changing of the vertical refresh rate by a user wishing to change monitors using Windows 95. In this method, the user is understood to input from a menu the type of monitor and resolution to be used, which is understood to cause Windows 95 to read monitor configuration information from a configuration file to a registry,

and which is understood to cause a device driver to read the refresh rate stored in the registry and to set the new refresh rate when driving the monitor. Figures 2A and 2B do not appear to disclose or suggest a notification unit, which notifies one of a plurality of signal sources of created display selection information that is based on identification signals relating to the pictures from a plurality of signal sources displayed in a plurality of windows on a single screen, as recited by amended Claim 9.

Thus, the Office is not understood to have yet established that either the *Domae et al.* patent or the *Nolan et al.* patent discloses or suggests the notification unit, recited by amended Claim 9. For this additional reason, the Office is not understood to have yet established a prima facie case of obviousness against amended Claim 9. Accordingly, for this additional reason, Applicant respectfully requests that the rejection of amended Claim 9 be withdrawn.

Independent Claim 27 recites, in part, a notification unit, which notifies one of the signal sources of each of the stored display attributes information (for each of a plurality of display windows in which pictures from the signal sources are displayed) and created display selection information that is based on identification signals relating to pictures from the plurality of signal sources displayed in the plurality of windows on a single screen.

Claim 27 is understood to be allowable over the *Domae et al.* and *Nolan et al.* patents for reasons similar to Claims 1 and 9, since Claim 27 combines a notification scheme similar to Claim 1 (notifying of stored displayed attributes) and a notification scheme similar to Claim 9 (notifying of created display selection information). And since Claims 29 and 30 also recite a notification scheme similar to Claim 27, they are understood to be allowable for similar reasons.

2. The Office is not understood to have yet established the factual basis for the motivation to combine the *Domae et al.* and *Nolan et al.* patents to produce the invention of the independent claims.

As noted above, MPEP § 2142 places the burden on the Office to establish the factual basis for the motivation to combine the references to produce the claimed invention: “The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure”.

Thus, to satisfy the motivation-to-combine criterion for rejecting Claim 1, the Office must cite art suggesting that a system such as the *Domae et al.* bowling display system be modified to store display attributes information for each of a plurality of display windows on a single screen, and to notify one of the signal sources of the stored display attributes information corresponding to the display windows in which the pictures of each of the plurality of signal sources are displayed on a single screen. But, as explained above, neither the *Domae et al.* patent nor the *Nolan et al.* patent is understood to relate to a single-screen, multiple-window display control device, as recited by amended Claim 1. Therefore, these patents are not understood to provide the motivation to modify the *Domae et al.* patent to produce the claimed single-screen, multiple-window display control device. Moreover, page 3 of the Office Action appears to agree with Applicant's position because the Office Action does not rely on these patents for the suggestion to modify the *Domae et al.* patent to produce the invention of Claim 1:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of using attributes information for each of display areas on the single screen as taught by Nolan et al. into the display control device having a plurality of signal sources of Domae et al. because this would provide to the user to be identified each interface as unique monitor with its own characteristics.

But the proposed reason to combine — to obtain the ability for a user to have each interface identified separately with its own characteristics — does not appear to be based on anything taught, or even hinted at, by anything in either patent, or elsewhere in the art of record. Thus, the Office Action has failed to establish the factual basis for the motivation to add the memory 60 from the *Nolan et al.* patent to the *Domae et al.* system, as required by MPEP § 2142.

Nor has the Office explained on what basis it considers that a person of merely ordinary skill would have felt the proposed motivation. As noted previously by Applicant, *Domae et al.* relates to a system that selects one signal, from among signals received from plural sources, for display either on a single monitor or spread over plural monitors. That is, in the *Domae et al.* system, only one signal is displayed. Apart from the fact that this does not appear to suggest in any clear way displaying *plural* images on *one* screen, as recited in Claim 1, the fact that the *Domae et al.* system displays only one signal seems to Applicant to make the proposed motivation for combination unrealistic. The intention in *Domae et al.* is to have one signal displayed, whether on a single screen or spread over several: either way, since only the signal from a single source is being shown, it is not understood in what way a user will be interested in having plural interfaces as unique monitors with their own characteristics, as suggested in the Office Action.

Moreover, the Office Action fails to address the motivation to add a notification unit recited by amended Claim 1 to the *Domae et al.* system.

At least for all of these reasons, the Office has not satisfied its burden of proof under MPEP § 2142 to establish the motivation to modify the *Domae et al.* system to produce the invention of amended Claim 1.

Turning to independent Claim 9, pages 4 and 5 of the Office Action discuss the motivation to combine the *Domae et al.* and *Nolan et al.* patents to produce the invention of Claim 9. But these portions of the Office Action fail to discuss the motivation to add the display selection unit recited by Claim 9 to the *Domae et al.* patent. Without addressing the motivation to add this feature to the *Domae et al.* patent, the Patent Office has not satisfied its burden of proof to establish a motivation to combine the art to produce the claimed invention.

In addition, the reason given to add the notification unit and the display selection information creating unit to the *Domae et al.* patent appears unpersuasive on its face. Page 5 of the Office Action states that it would be obvious to add these features to the *Domae et al.* “...because this would be helped the worker selects the brand name and model of high resolution of the display (see column 2, lines 50-55)”. This portion of the *Nolan et al.* patent is understood to teach the display of various conventional menus by Windows 95 entitled “Display Properties”, “Settings”, “Change Display Type...”, “Monitor Type...Change”, “MFG _of_ 85 Hz_Monitor”, and “MFG _of_ 60_ Hz Monitor” permitting the user to change the display type used and the display resolution. But, this conventional menu display of Windows 95 is not understood to have anything to do with a notification unit which notifies one of a plurality of signal sources

of created display selection information that is based on identification signals relating to pictures from the plurality of signal sources displayed in a plurality of windows on a single screen.

As a result, this conventional menu display of Windows 95 is understood to be unrelated to the notification unit recited in amended Claim 9. Therefore, it cannot provide the motivation to modify the *Domae et al.* system to produce the notification unit recited by amended Claim 9.

At least for all of these reasons, the Office has not satisfied its burden of proof under MPEP § 2142 to establish the motivation to modify the *Domae et al.* system to produce the invention of amended Claim 9.

As to independent Claims 27, 29, and 30, the Office Action does not provide any discussion of the motivation to modify the *Domae et al.* patent to produce: the display selection unit and notification unit of Claim 27; the appropriating and notifying steps of Claim 30; and the code for the appropriating and notifying steps of Claim 31. Therefore, Applicant assumes that the Office Action is relying on the discussion of Claim 9 to provide the motivation to add these features of the *Domae et al.* patent. (If not, Applicants respectfully request that the next Office Action address this issue.) But if so, the motivation-to-combine argument for Claims 27, 29, and 30 suffers the same deficiencies as the motivation-to-combine argument for Claim 9.

Therefore, at least for this reason, the Office has not satisfied its burden of proof under MPEP § 2142 to establish the motivation to modify the *Domae et al.* system to produce the invention of amended Claims 27, 29, and 30.

3. The Office is not understood to have yet established the factual basis for a reasonable expectation of success in combining the applied art to produce the invention of the independent claims.

MPEP § 2142 requires that the Office also establish that there be a reasonable expectation of success in modifying or combining the cited art to produce the claimed invention. In addition, the reasonable expectation of success “must be found in the prior art, and not based on applicant's disclosure”.

But here, the Office Action fails to satisfy its burden of proof to establish such a reasonable expectation of success for three reasons. First, the Office Action does not even address this issue. Second, since the *Domae et al.* system is designed to display only one signal, it is not at all clear how it could be modified to produce the single-screen, multiple window devices, system, method, and medium recited by the independent claims. Therefore, there are reasons to believe such a modification may not succeed. Third, the addition of elements of the *Nolan et al.* device to the *Domae et al.* system, as posited in the Office Action, would not produce the single-screen, multiple window inventions recited by the independent claims because the *Nolan et al.* patent is not understood to relate to a single-screen, multiple window device, system, or method. In other words, adding, for example, *Nolan et al.*'s video memory 60 to the *Domae et al.* system would not produce the attributes information memory recited by Claim 1 because the video memory 60 does not store display attributes information for each of a plurality of display windows on a single screen.

For all of these reasons, Applicant submits that the Office has not satisfied its burden of proof to establish a reasonable expectation of success in producing the invention of independent

Claims 1, 9, 27, 29, and 30, as required by MPEP § 2142. For this additional reason, the Office is not understood to have yet established a prima facie case of obviousness against the independent claims. Accordingly, for this additional reason, Applicant respectfully requests that the rejections be withdrawn.

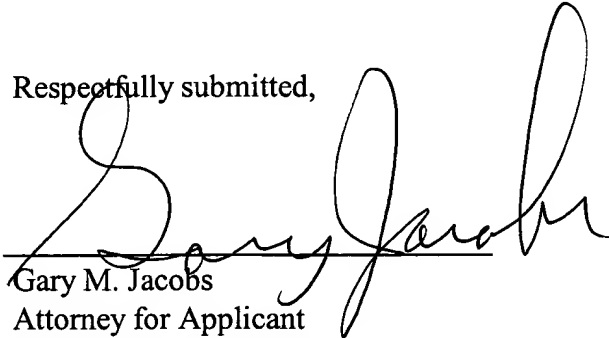
The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

Conclusion

Since none of the three criteria for establishing a prima facie case of obviousness under MPEP § 2142 have been satisfied for the present claims, Applicant respectfully requests withdrawal of the outstanding rejections and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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